

In January 2023, FortisAlberta launched its Electric Vehicle (EV) Smart Charging Pilot, a two-year initiative aimed at exploring how smart charging can help manage electricity demand and reduce stress on the grid. The pilot wrapped up in June 2024, with nearly 320 EVs participating from 57 communities across our service area.

What was the pilot about?

The pilot focused on understanding how customers charge their EVs today and how we can manage that demand in the future. Specifically, we assessed two approaches:

Time-of-Use (TOU) Charging: Offering incentives for charging during off-peak times (like overnight) to shift demand.

Managed Charging: Using technology to automatically adjust charging times and reduce strain on the system.

Key Findings

Participation: Customers in both groups were willing to adjust their charging habits, helping lower demand during peak periods.

Smart Technology Wins: Managed charging effectively reduced charging peaks across the day, with minimal inconvenience to customers. Participants only opted out of managed charging sessions 0.16 per cent of the time, showing strong trust in the system.

Make Demand Response Events Automatic: In simulated high-demand events, customers who were enrolled automatically in the managed charging group (opt-out) participated 93 per cent of the time, compared to 7 per cent for the opt-in TOU group who had to press a button to enrol. This highlights the value of automatic enrolment in DR events.

Satisfaction: Overall, participants gave the pilot a satisfaction rating of four out of five stars.

Why it matters

Smart charging isn't just about convenience. It's a proactive way to optimize our existing grid infrastructure without costly upgrades, ensuring reliable electricity for everyone. As EV adoption grows, programs like this can help balance electrical demands and reduce the risk of outages.

Next steps

FortisAlberta is using the insights from this pilot to explore future managed charging programs and inform policy makers about Demand Side Management (DSM) opportunities in Alberta. We're preparing for the future with solutions that are both efficient and customer friendly.

Thank you to everyone who participated in the pilot. Your involvement is helping shape the future of EV charging in Alberta!